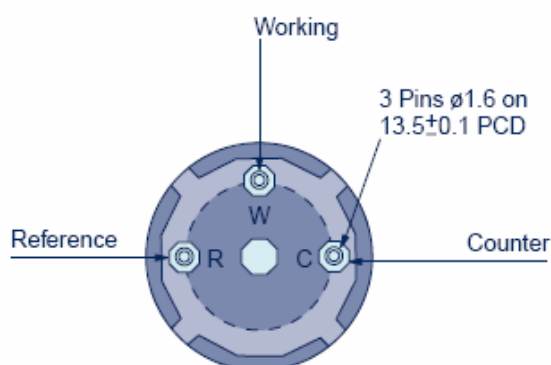
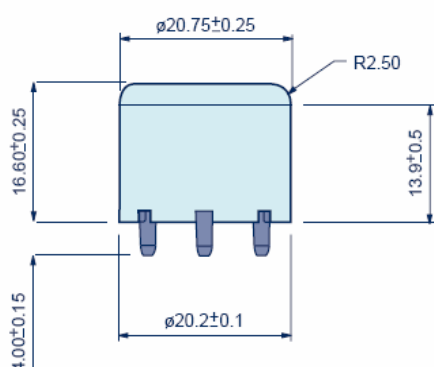
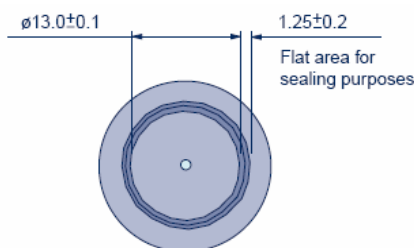


# SURECELL CO (H) Carbon Monoxide



## OPERATING PERFORMANCE

<b>Operating principle:</b>	3-electrode electrochemical
<b>Gas detected:</b>	Carbon Monoxide (CO)
<b>Measurement range:</b>	0 – 500ppm
<b>Maximum overload<sup>1</sup>:</b>	1000ppm
<b>Expected Lifetime:</b>	2 years in air from date of manufacture
<b>Output signal:</b>	0.11 ± 0.02 µA/ppm
<b>Temperature range<sup>2</sup>:</b>	Continuous: -20°C to +40 °C Intermittent: -40°C to +55 °C
<b>Pressure range:</b>	1 atm ± 10%
<b>Humidity range (non condensing):</b>	Continuous: 15 – 90% Intermittent: 0 – 99%
<b>Response time (T<sup>5</sup><sub>90</sub>):</b>	< 30 seconds
<b>Baseline offset (clean air):</b>	< +3ppm equivalent
<b>Zero shift (-40°C to +55°C):</b>	< +2ppm equivalent
<b>Long term output drift:</b>	< 5% per annum
<b>Repeatability:</b>	< ±5%
<b>Linearity:</b>	Linear < ±5%
<b>Recommended load resistor:</b>	5Ω
<b>Bias voltage:</b>	Not required

## INTRINSIC SAFETY DATA

<b>Maximum current at 1000ppm:</b>	0.2mA
<b>Maximum o/c voltage:</b>	1.3V
<b>Maximum s/c current:</b>	< 1.0A

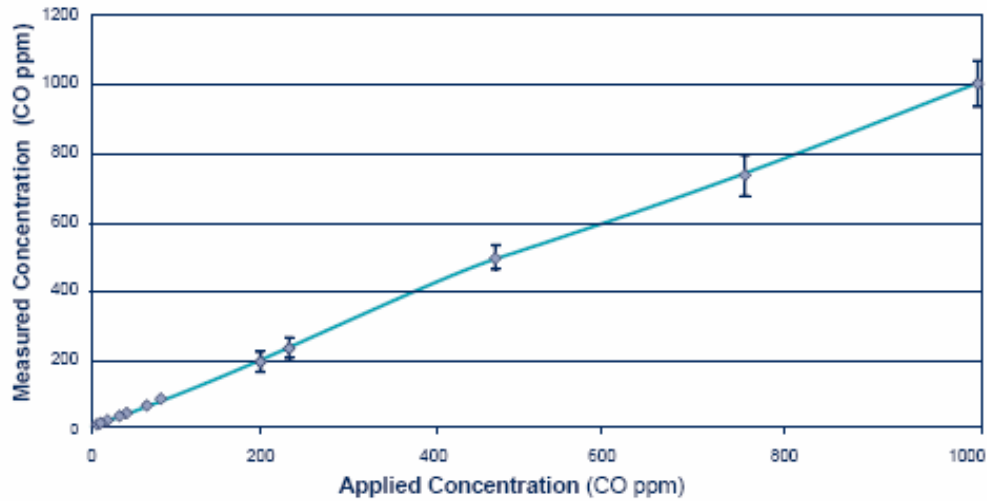
## PHYSICAL SPECIFICATION

<b>Weight:</b>	5g (approx)
<b>Housing material:</b>	Noryl 110
<b>Storage life:</b>	6 months in original sealed container
<b>Storage conditions:</b>	+10°C to +30°C
<b>Orientation:</b>	Any
<b>Warranty period:</b>	18 months from date of despatch
<b>Part number:</b>	2112B2004

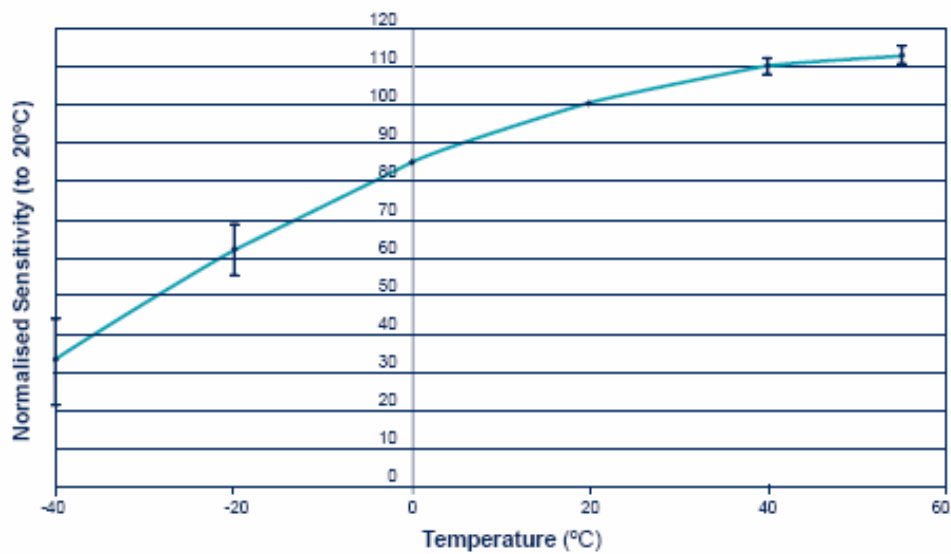
Notes: 1. After exposure to high concentrations of Carbon Monoxide, the cell should be left for an extended period of time to recover fully its original characteristics. 2. The performance characteristics are based on this temperature range. However the cell can be used outside this range but not all performance specifications will then be valid. If the cell is to be used outside this range, then the user should characterise the cell for their application. 3. All product specifications are quoted at standard temperature and pressure. 4. Poisoning: The CO (H) sensor is designed for operation in a wide range of environments and harsh conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the Cell, as the solvent may cause crazing of the plastic.

# SURECELL CO (H) Carbon Monoxide

Linearity of CO (H) SureCells (0 to 1000 ppm)



Temperature Coefficients of CO SureCells



# SURECELL CO (H) Carbon Monoxide

## CROSS-SENSITIVITY

Whilst sensors are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various gases. The table below is not exclusive and other gases not included in the table may still cause a sensor to react.

Cross Sensitivity Table					
Gas	Concentration Used (ppm)	Reading (ppm CO)	Gas	Concentration Used (ppm)	Reading (ppm CO)
Carbon Monoxide	50	50	Ethylene	100	85
Hydrogen Sulphide	10	38	Carbon Dioxide	5000	0
Sulfur Dioxide	2	1	Ammonia	50	0
Nitrogen Dioxide	3	-1	Methane	5000	0
Chlorine	2	<±2	Ethanol	40	12
Hydrogen	100	10			

**Note:** The figures in this table are typical values and should not be used as a basis for cross calibration. Cross sensitivities may not be linear and should not be scaled. All data based on a 5 minute gassing. For some cross interferents, break through will occur if gas is applied for a longer time period.

The cross-sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted.

**WARNING:** By the nature of the technology used, any electrochemical sensor can potentially fail to meet specification without warning. Although Euro-Gas makes every effort to ensure reliability, where life safety is a performance requirement of the products, we recommend that all sensors and instruments are checked for response to gas before use.

The data contained in this document is believed to be accurate and correct. The data given is for guidance only. Euro-Gas Management Services Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this datasheet or the information contained in it. Customers should test the sensors under their own conditions to ensure that the sensors are suitable for their own requirements and in accordance with the plans and circumstances of the specific project and any standards/regulations pertaining to the country in which the sensors will be utilised. This datasheet is not intended to form the basis of a contract and in the interest of product improvement, Euro-Gas reserves the right to alter design features and specifications without notice.

06/14